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ENVIRONMENTAL RESTORATION PROGRAM

Monthly Report For
May, 1991

June 20, 1991

EG&G ROCKY FLATS

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS PLANT

ENVIRONMENTAL RESTORATION PROGRAM

MONTHLY REPORT FOR

MAY 1991

TABLE OF CONTENTS

1.0 INTRODUCTION

This Monthly Status Report presents the current status and technical achievements of the Rocky Flats Environmental Restoration Program for May 1991. This Program implements the Interagency Agreement between the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the State of Colorado to investigate, assess, and remediate, where necessary, contaminated areas at or adjacent to DOE's Rocky Flats Plant in Golden, Colorado. This agreement was signed on January 22, 1991. The work is being performed for DOE by EG&G Rocky Flats, Inc.

Section 2.0 of this report, the Executive Summary, highlights significant achievements and summarizes the milestones completed during May. It also presents any major unresolved issues of the Program. Technical progress, schedule status, and milestone status for each Operable Unit as well as other Program activities are presented in Section 3.0. Operable Units in which no FY91 activity is planned are not included. Section 4.0 contains the schedules for routine environmental sampling as required by paragraph 210 of the Interagency Agreement. Section 5.0 contains a list which identifies the contractors and subcontractors performing work on the Program as required by paragraph 13 of the IAG.

2.0 EXECUTIVE SUMMARY

2.1 SIGNIFICANT ACTIVITIES AND ACHIEVEMENTS FOR THE REPORT MONTH

Representatives from DOE, EPA, and CDH toured the OU1 - 881 Hillside site on May 21, 1991, to familiarize themselves with the environmental evaluation program and to inspect the reference sites. Meetings were also held with the regulatory agencies to discuss technical details of the RFI/RI geotechnical tasks. Amendments resulting from these meetings, which reflect changes in the downhole sampling procedures to the RFI/RI Work Plan and Standard Operating Procedures (SOPs) will be submitted to EPA/CDH the second week in June 1991.

EG&G and DOE organized a field site visit for EPA and CDH personnel on May 21, 1991, in support of the environmental evaluations (EEs) for OUs 1, 2, and 5. The group observed the Woman Creek drainage and the habitat types found there, the aquatic sampling locations, and the vegetation communities that may be assessed in the EE for OUs 1, 2, and 5.

Final inspection of the OU1 891 treatment building was held on May 9, 1991. All four 16,000-gallon influent tanks have been set into place on the containment pad, and systems operations testing which began on May 9, 1991, was completed.

The EPA and CDH visit to the OU1 Interim Remedial Action (IRA) site on May 22, 1991, cleared up questions regarding location and disposition of excavation spoils piles and handling of groundwater encountered during excavation for the OU1 IRA Phase II-B French drain construction. Final design and specification review for the French drain was held on May 31, 1991.

Field mobilization activities for the OU2 RFI/RI fieldwork began on schedule on May 1, 1991. The subcontractor is onsite to initiate the following activities: borehole location, staking and surveying, decontamination pad operational readiness, and safety training.

A location at the east end of the contractor yard adjacent to the temporary decontamination pad is being considered for a permanent drum storage facility for contaminated remedial investigation-generated wastes. This will require design of a dedicated hazardous waste storage facility for primary and secondary containment.

Two IAG milestones for the OU2 IRA were successfully completed in May. The granular activated carbon (GAC) system installation was completed on May 12, 1991, two days behind the scheduled May 10, 1991, milestone date. High winds prevented delivery and installation of large pieces of equipment in time for the scheduled completion date. EPA and CDH inspectors were onsite to observe the start of field treatability testing on its IAG milestone date of May 13, 1991.

RFO and EG&G staff met with EPA and CDH staff on May 15, 1991, to discuss development of an IRA plan for the Woman Creek drainage of OU2. A complicating factor is that the surface water seep sources are either dry or low in radionuclides so that bench-scale treatability testing is not productive. In a May 22, 1991, follow-up meeting, it was determined that characterization of radionuclides would be substituted for treatability tests. On May 29, 1991, EG&G and DOE agreed that a characterization study would include an evaluation of historical data followed by an analytical characterization of the physical and chemical form of the radionuclides as well as potential transport mechanisms.

DOE and EG&G personnel participated in a meeting with EPA to discuss methods to educate the public on

risk assessment associated with OU3 - Offsite Areas. Finalized OU3 documents will be the basis for the presentations. Consensus of the best approach was not reached at the meeting. EPA surveyed the local cities and environmental groups for interest and reported back at another meeting on May 31, 1991, with a recommendation that a four-hour risk assessment workshop be held with the cities and local environmental groups.

2.2 PROBLEMS AND PROGRAMMATIC ISSUES

Procurement of the OU1 Phase II-A ion exchange system and effluent storage tanks is being delayed. There is currently a shortage of the required American-made ASME-certified tanks. The best contractor estimate on the delivery date of the ion exchange tanks and effluent storage tanks is October 1991, and January 1992, respectively. Negotiations with the contractor are taking place in order to expedite the procurement of these tanks.

The DOE NEPA group has directed EG&G not to proceed with the OU1 and the OU2 drilling and trenching fieldwork activities until a Categorical Exclusion has been issued. If this issue further delays the start of RI fieldwork, IAG milestones could be impacted.

Remedial actions for OU3 - Offsite Areas required under the 1985 McKay vs. U.S. Settlement Agreement may be in conflict with CERCLA. Tilling of the land surface to mix plutonium-contaminated surface soil, as required under the Settlement Agreement, prior to completion of the RI/FS, will probably not be acceptable to EPA. The remedial action as determined by the RI/FS process, if any, will probably not include plutonium soil mixing through tilling. EPA/CDH and DOE staff are working to resolve the issue.

Western Aggregate has submitted a request to DOE to mine the mineral resources for which they own the rights and which are under a portion of the western edge of the Rocky Flats Plant. The land in question is located within OU11 - West Spray Field. DOE has had preliminary discussions with EPA on this matter, and EPA agrees with DOE that any decision on mining operations should be delayed until the OU assessment is complete. The DOE-RFO legal staff is reviewing the request from Western Aggregate.

2.3 NEAR-TERM IAG MILESTONES

OU#	Milestone Description	Scheduled Completion	Actual Completion
02	Field Treatability Test System Installation Complete	10 May 91	12 May 91
02	Begin Field Treatability Testing	13 May 91	13 May 91
SW	Submit Final Treatability Study Plan	03 Jun 91	
SW	Submit Community Relations Plan Responsiveness Summary	21 Jun 91	

3.0 PROJECT STATUS

3.1 OU1 - 881 HILLSIDE AREA

DESCRIPTION:

The soil and groundwater at the 881 Hillside Area, located north of Woman Creek in the southeast section of RFP, were potentially contaminated in the 1960s and 1970s with solvents and radionuclides. The various individual hazardous substance sites that make up OU1 are being investigated and treated as high-priority sites because of elevated concentrations of organic compounds in the near-surface groundwater and the proximity of the contamination to a drainage system leading to an offsite drinking water supply. The selected Interim Remedial Action (IRA) at OU1 involves construction of an underground drainage system (French drain) that will intercept and contain contaminated groundwater flowing from the OU1 area. The contaminated water will be treated and released back into the interceptor ditch alongside Woman Creek.

3.1.1 OU1 ASSESSMENT

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase III RFI/RI Work Plan	06 Feb 90
Submit Final Phase III RFI/RI Work Plan	31 Oct 90

MAY WORK ACTIVITY STATUS:

The OU1 RI field program began on May 7, 1991, with biota sampling for the environmental evaluation (EE) program and borehole staking. The EE task is continuing with vegetative sampling, selection of reference sites, and small mammal trap and release. The Spring 1991 mapping will be completed in the first week of June 1991.

The OU1 RI field program contract was negotiated during the week of May 20, 1991, and final award is forthcoming.

Representatives from DOE, EPA, and CDH toured the 881 Hillside site on May 21, 1991, to familiarize themselves with the environmental evaluation program and to inspect the reference sites. Meetings were also held with the regulatory agencies to discuss technical details of the geotechnical tasks. Amendments resulting from these meetings, which reflect changes in the downhole sampling procedures to the RFI/RI Work Plan and standard operating procedures (SOPs), will be submitted to EPA/CDH the second week in June 1991.

PLANNED WORK FOR JUNE:

Drilling activities for Phase III RFI/RI fieldwork are tentatively scheduled to start June 17, 1991.

PROBLEMS:

All SOP training is complete, but intrusive fieldwork can not proceed until DOE NEPA staff clarifies the Categorical Exclusion for drilling activities, or gives the go-ahead without an exclusion.

OPEN ITEMS: None

3.1.2 OU1 REMEDIATION

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Proposed IM/IRA Decision Document	18 Sep 89
Submit Proposed IM/IRA Decision Document	06 Oct 89
Submit Final IM/IRA Decision Document	05 Jan 90
Begin Phase I-A IM/IRA Construction	15 Jan 90
Restart Phase I-A IM/IRA Construction (after shutdown)	20 Jun 90
Begin Phase I-B IM/IRA Construction (ahead of schedule)	28 Sep 90
Submit IM/IRA Implementation Document	22 Feb 91
Begin Phase II-A IM/IRA Construction	01 Apr 91

MAY WORK ACTIVITY STATUS:

Final inspection of the 891 treatment building was held on May 9, 1991. All four 16,000-gallon influent tanks have been set into place on the containment pad and systems operations testing which began on May 9, 1991, was completed.

The EPA and CDH visit on May 22, 1991, cleared up questions regarding location and disposition of excavation spoils piles and handling of groundwater encountered during excavation for the Phase II-B French drain construction. Final design and specification review for the French drain was held on May 31, 1991.

PLANNED WORK FOR JUNE:

The contract on Phase II-B construction (diversion structure) is expected to be let in late June 1991.

PROBLEMS:

Procurement of the Phase II-A effluent storage tanks is being delayed. There is currently a shortage of the required American-made ASME-certified tanks. The best contractor estimate on the delivery date of the ion exchange tanks and effluent storage tanks is January 1992. Negotiations with the contractor are taking place in order to expedite the procurement of these tanks. The delay will not impact completion of the milestone for start of IRA testing in August 1991.

OPEN ITEMS: None

3.2 OU2 - 903 PAD, MOUND, AND EAST TRENCHES

DESCRIPTION:

The contamination at the 903 Pad and Mound areas is largely attributed to the storage in the 1950s and 1960s of waste drums that corroded over time, allowing hazardous and radioactive material to leak into the surrounding soil. Additional contamination may have resulted from wind dispersion during removal and soil movement activities. The East Trenches Area was used for disposal of plutonium- and uranium-contaminated waste and sanitary sewage sludge from 1954 to 1968. Two areas adjacent to the trenches were used for spray irrigation of sewage treatment plant effluent, some of which may have contaminants that were not removed by the treatment system.

The IM/IRA Plan provides for surface water seeps in source areas of contamination to be treated and discharged to the surface water system. Operation of a field-scale treatability unit began for the Walnut Creek drainage in 1991. The effectiveness of the treatment process will be evaluated at three locations: the entrance to the treatment facility, several points within the facility, and the discharge point. After completion of the field-scale treatability tests, the unit is anticipated to remain in service until the final remedial action is operational. Bench-scale testing of surface water in the Woman Creek drainage is planned for the spring of 1991, after which a separate Interim Remedial Action Plan for this drainage will be developed.

3.2.1 OU2 ASSESSMENT

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase II RFI/RI Work Plan (Alluvial)	21 Dec 89
Submit Final Phase II RFI/RI Work Plan (Alluvial)	12 Apr 90
Submit Draft Phase II RFI/RI Work Plan (Bedrock)	05 Feb 91

MAY WORK ACTIVITY STATUS:

Field mobilization activities to implement the OU2 RFI/RI Work Plan began on schedule on May 1, 1991. The subcontractor is onsite to initiate borehole location, staking and surveying, decontamination pad operational readiness, and safety training. Each day will begin with a project status and safety meeting.

In preparation for drilling, Buffer Zone access pass requests for subcontractor staff were submitted to Access Control, and Protected Area access pass requests have been prepared. Excavation permits have been obtained for the initial four boreholes and wells. An Engineering Job Order was assigned to this project for extended plant engineering and construction support services. The Health and Safety Plans for the subcontractor and for EG&G were approved by the RFP Health and Safety Department.

An Operational Readiness Review (ORR) is in progress prior to initiating the drilling and well construction activities. The ORR package is being prepared with the support of the subcontractor and must be

completed before drilling activities can begin.

EPA/CDH comments on the draft Phase II RFI/RI Work Plan (Bedrock) were received on May 6, 1991, and are being reviewed by DOE and EG&G.

PLANNED WORK FOR JUNE:

The scheduled start-up for alluvial drilling activities is now tentatively June 17, 1991. Each piece of field equipment, drilling rigs, and support vehicles that may have been potentially exposed to contamination at other job sites will be decontaminated prior to entry into the OU2 area.

Resolution of EPA/CDH comments by DOE, EG&G, and the subcontractor on the draft Phase II RFI/RI Work Plan (Bedrock) will continue through June 1991. The IAG milestone date for issue of the final Phase II RFI/RI Work Plan (Bedrock) to EPA/CDH is July 2, 1991.

PROBLEMS:

The DOE NEPA group has directed EG&G to stop the OU2 drilling and trenching fieldwork activities until a Categorical Exclusion has been prepared on the OU2 field activities. The schedule impact of this NEPA requirement is being evaluated.

OPEN ITEMS: None

3.2.2 OU2 REMEDIATION

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Proposed IM/IRA Decision Document	19 Jun 90
Submit Proposed Plan IM/IRA Decision Document	18 Sep 90
Submit Draft Responsiveness Summary	13 Dec 90
Submit Draft Responsiveness Summary and Final IM/IRA Decision Document	11 Jan 91
Field Treatability Test System Installation Complete	12 May 91
Begin Field Treatability Tests	13 May 91

MAY WORK ACTIVITY STATUS:

Two IAG milestones for OU2 IRA were successfully completed in May. The granular activated carbon (GAC) treatment facilities were functional on May 11, 1991, when clean water was circulated for the system checkout. Total system installation was completed on May 12, 1991, with the installation of diversion sumps

and the installation of a small section of piping into the influent storage tank. The milestone for installation of equipment was delayed for two days because high winds prevented delivery and installation of large pieces of equipment in time for the scheduled May 10, 1991, completion date. EPA and CDH inspectors were onsite to observe the start of field treatability testing on its milestone date of May 13, 1991.

The GAC treatment system has been working well and without problems. Final completion of the physical construction work for the system will be completed in early June 1991, and as-built plans and the Operation and Maintenance Manual are being prepared. The first run of water samples for the system were collected and packaged on May 29, 1991, for delivery to the appropriate analysis laboratory. It is anticipated that a final inspection of the system will be scheduled during the week of June 3, 1991. Minor field modifications of the GAC system are continuing which include addition of flow totalizers at the collection sources and installation of a containment berm for the generator set. Guidance issues were outlined by Waste Management on May 30, 1991, for temporary storage and characterization of used filter socks and carbon at the GAC treatment system. A schematic diagram of the facility is shown on page 11.

DOE-RFO and EG&G staff met with EPA and CDH staff on May 15, 1991, to discuss development of an IRA plan for the Woman Creek drainage of OU2. A complicating factor is that the surface water seep sources are either dry or low in radionuclides so that bench-scale treatability testing is not productive. A follow-up meeting with the regulatory agencies was held on May 22, 1991. At this meeting, it was determined that characterization of radionuclides would be substituted for treatability tests. On May 29, 1991, EG&G staff met with DOE to discuss the objectives and methodology of the radionuclide characterization study for surface water locations in the Woman Creek drainage basin. It was agreed that a characterization study would include an evaluation of historical data followed by an analytical characterization of the physical and chemical form of the radionuclides and potential transport mechanisms. On May 30, 1991, EG&G provided DOE-RFO with a proposed IRA Plan schedule which RFO will transmit to EPA/CDH by June 12, 1991.

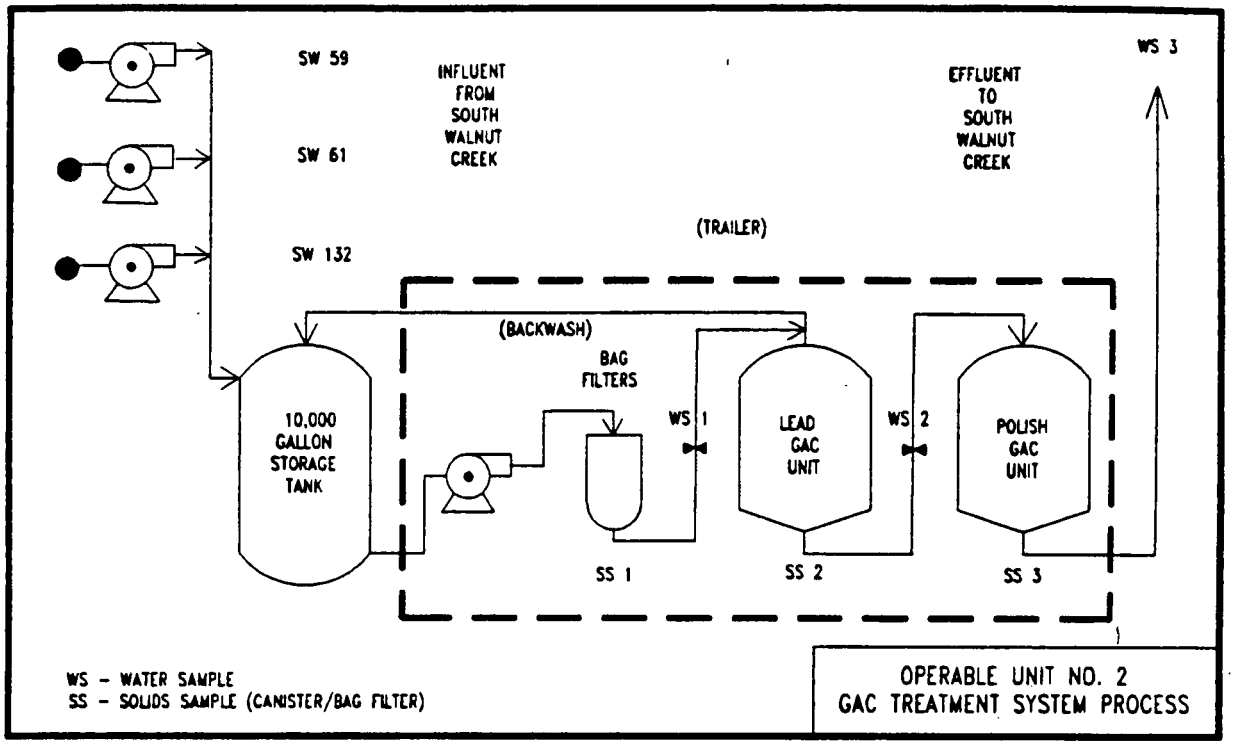
PLANNED WORK FOR JUNE:

Operation of the South Walnut Creek IRA Phase I (GAC unit) will continue.

EG&G staff will continue to develop the schedule for the proposed Woman Creek phase of the OU2 IRA.

PROBLEMS: None

OPEN ITEMS: None



Schematic Diagram of the OU2 IRA Granular Activated Carbon (GAC) System

3.3 OU3 - OFFSITE AREAS

DESCRIPTION:

OU3 can be divided into two categories based on the two drivers of the activities. The IAG directs activities according to CERCLA. This involves assessment of contamination in offsite areas also referred to as Individual Hazardous Substance Sites (IHSSs) (previously referred to as SWMUs): Contamination of the Land Surface (IHSS 199), Great Western Reservoir (IHSS 200), Standley Lake (IHSS 201), and Mower Reservoir (IHSS 202). The second category responds to a 1985 out-of-court lawsuit settlement, McKay v. U.S., which directed that the surface soil contamination be remediated. Remedial activities in compliance with the Settlement Agreement (deep disc plowing) began in 1985. The disturbance resulting from remediation is being revegetated with mediocre success. The overall schedule for this activity is determined by the year-to-year success of the revegetation effort and requirements of the land owners.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Past Remedy Report	26 Oct 90
Submit Draft Historical Information/Preliminary Health Risk Assessment Report	09 Nov 90
Submit Final Past Remedy Report	02 Apr 91
Submit Final Historical Information/Preliminary Health Risk Assessment Report	16 Apr 91

MAY WORK ACTIVITY STATUS:

The final Past Remedy Report was resubmitted for the second final review period to EPA/CDH on May 24, 1991, as scheduled. It is expected to be approved in a short period of time.

Comments on the Final Historical Information Summary and Preliminary Health Risk Assessment Report were received from EPA/CDH on May 15, 1991. DOE and RPD met with EPA/CDH on May 28, 1991, to discuss these comments. Several CDH comments were withdrawn, as the reviewers were new to the OU3 reports and lacked adequate background on the purpose of the documents and the CERCLA process. One point of contention is an EPA comment requiring an additional risk assessment for a future land use scenario that is not currently in the document. The problem will be resolved before the revised document is resubmitted to EPA/CDH in June 1991.

Internal review of the preliminary draft Phase I RFI/RI Work Plan began May 10, 1991, and will continue into June 1991.

DOE and EG&G personnel participated in a meeting with EPA to discuss methods to educate the public on risk assessment. The soon-to-be finalized OU3 documents will be the basis for the presentations. Consensus of the best approach was not found at the meeting. EPA surveyed the local cities and environmental groups for interest and reported back at another meeting with a recommendation that a four-

hour risk assessment workshop be held with the cities and local environmental groups.

PLANNED WORK FOR JUNE:

Resolution of issues on the Historical Information Summary and Preliminary Health Risk Assessment Report will be completed by June 15, 1991, when it will be resubmitted for agency approval.

Internal review of the preliminary draft Phase I RFI/RI Work Plan will be completed June 10, 1991. Finalization will then commence in preparation of its July IAG milestone submittal date.

PROBLEMS:

Remedial actions required under the 1985 McKay vs. U.S. Settlement Agreement may be in conflict with CERCLA. Tilling of the land surface to mix plutonium contaminated surface soil, as required under the Settlement Agreement, prior to completion of the RI/FS will probably not be allowed by EPA. The remedial action as determined by the RI/FS process, if any, will probably not include plutonium soil mixing through tilling.

OPEN ITEMS: None

3.4 OU4 - SOLAR PONDS

DESCRIPTION:

Five evaporation ponds were used for storage of low-level radioactive process waste, sanitary treatment plant effluent, and contaminated groundwater collected downgradient of the ponds. The ponds are RCRA interim status regulated units that are currently under closure. Leakage from the ponds has contaminated soils and groundwater with various contaminants, including heavy metals and uranium.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	08 Jun 90

MAY WORK ACTIVITY STATUS:

A letter is being prepared for submittal to DOE-RFO by EG&G describing the scheduling impact to the RFI/RI fieldwork from the delay in completion of the Pondcrete operation.

PLANNED WORK FOR JUNE:

No activities are scheduled until July 1991.

PROBLEMS: None

OPEN ITEMS: None

3.5 OU5 - WOMAN CREEK

DESCRIPTION:

This activity encompasses assessment and remediation at the Woman Creek drainage, to include: Original Landfill; Ash Pits 1-4, Incinerator, and Concrete Wash Pad; Retention Ponds C-1 and C-2; and the surface disturbance southeast of Building 881.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	05 Apr 91

MAY WORK ACTIVITY STATUS:

Comments on the EE Work Plan were discussed at a meeting among DOE, EG&G, EPA, and CDH in April. At this meeting, concerns for the consistency of sampling at OUs 1, 2, and 5 were resolved, and comments from both regulatory agencies were taken under advisement. Communications at this meeting were encouraging, and agreement to use the recently-established Risk Assessment Technical Work Group to maintain an open dialogue on environmental evaluations was reached. Rewritten work plans for OUs 1, 2, and 5 will be submitted to EPA/CDH in early June 1991. These will all be consistent and will serve to guide the fieldwork to be performed this summer.

PLANNED WORK FOR JUNE:

The agencies' review of the draft Phase I RFI/RI Work Plan, which includes the EE Work Plan, will continue into early July 1991.

PROBLEMS: None

OPEN ITEMS:

The regulatory agencies' comments on the draft Phase I RFI/RI Work Plan are scheduled to be completed by July 3, 1991.

3.6 OU6 - WALNUT CREEK

DESCRIPTION:

This activity encompasses assessment and remediation at the Walnut Creek Drainage, to include: Sludge Dispersal; Retention Ponds A-1, A-2, A-3, A-4, A-5, B-1, B-2, B-3, B-4, and B-5; Old Outfall; Triangle Area; Trenches A, B, and C; and the North section of the East Spray Field.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	19 Apr 91

MAY WORK ACTIVITY STATUS:

No activity

PLANNED WORK FOR JUNE:

The regulatory agency comments on the draft Phase I RFI/RI Work Plan are scheduled to be completed in July 1991.

PROBLEMS: None

OPEN ITEMS:

The agency review of the draft Phase I RFI/RI Work Plan will continue into mid-July 1991.

3.7 OU7 - PRESENT LANDFILL

DESCRIPTION:

The Present Landfill began operation in 1968. The landfill provided a means of disposing nonradioactive and nonhazardous solid waste. Some of the solid wastes from the plant, which were disposed in the landfill, are suspected to have contained hazardous waste and/or hazardous constituents. Although currently operating as a nonhazardous sanitary landfill, the facility is considered an inactive hazardous waste disposal unit undergoing RCRA closure.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	08 Jun 90

MAY WORK ACTIVITY STATUS:

The draft Phase I RFI/RI Work Plan was submitted June 1990, but due to FY91 budget limitations and scheduled work loads in the higher priority OUs, the review of the work plan was postponed until July 1991. During this period, new information was received that requires that the work plan be re-written and re-submitted.

PLANNED WORK FOR JUNE:

A kickoff meeting with EG&G's subcontractors for preparation of the revised draft Phase I RFI/RI Work Plan for OU7 has been scheduled for June 5, 1991. The final work plan is scheduled to be submitted to the regulatory agencies by August 28, 1991.

PROBLEMS: None

OPEN ITEMS: None

3.10 OU10 - OTHER OUTSIDE CLOSURES

DESCRIPTION:

OU10 is made up of 18 IHSSs consisting of various hazardous waste units. An RFI/RI Work Plan is currently in preparation. The primary components of the RFI/RI Work Plan for OU10 will be a Field Sampling Plan (FSP), Baseline Risk Assessment Plan (BRAP), and an EE Work Plan.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

The first IAG milestone for this OU is scheduled for November 1991.

MAY WORK ACTIVITY STATUS:

Work has begun on preparation of the EE Work Plan for OU10 which will be integrated with the Phase I RFI/RI Work Plan.

PLANNED WORK FOR JUNE:

Preparation of the EE Work Plan will continue through June 1991. A cost estimate to implement the closure activities in FY92 will be prepared.

PROBLEMS: None

OPEN ITEMS: None

3.11 OU11 - WEST SPRAY FIELD

DESCRIPTION:

The West Spray Field is located within Rocky Flats property boundary immediately west of the plant security area. The West Spray Field was in operation from April 1982 to October 1985. During operation, excess liquids form the solar evaporation ponds 207-B North and Center (contaminated groundwater in the vicinity of the ponds and treated sanitary sewage effluent) were pumped periodically to the West Spray Field for spray application. The spray field boundary covers an area of approximately 105.1 acres, 38.3 of which received direct application of hazardous waste. The RFI/RI process will entail field studies to determine the presence and levels of hazardous constituents in soil and groundwater.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	08 Jun 90

MAY WORK ACTIVITY STATUS:

No activities are scheduled until July 1991.

PLANNED WORK FOR JUNE:

No activities are scheduled until July 1991.

PROBLEMS:

Western Aggregate has submitted a request to DOE to mine the mineral resources for which they own the rights and which are under a portion of the western edge of the Rocky Flats Plant. The land in question is located within Operable Unit 11 - West Spray Field. DOE has had preliminary discussions with EPA on this matter, and EPA agrees with DOE that a decision for any mining operations should be delayed until the OU assessment is complete. The DOE-RFO legal staff is reviewing the request from Western Aggregate.

OPEN ITEMS: None

3.12 SITEWIDE ACTIVITIES

DESCRIPTION:

Sitewide activities include several tasks that encompass a wide variety of plans, procedures, reports, studies, and other activities required by the IAG and that apply to RFP in general.

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES: None

MILESTONE ACCOMPLISHMENTS:

Submit Draft Background Study Report (Water)	15 Dec 89
Submit Draft Background Study Report (Soils)	15 Dec 89
Submit Draft Community Survey Plan	23 Jan 90
Submit Final Community Survey Plan	22 Mar 90
Submit Draft Health and Safety Plan	15 Aug 90
Submit Draft Quality Assurance Project Plan	29 Aug 90
Submit Draft Standard Operating Procedures	29 Aug 90
Submit Draft Plan for Prevention of Contaminant Dispersion	19 Sep 90
Submit Draft Treatability Study Plan	21 Sep 90
Submit Draft Community Relations Plan	01 Nov 90
Submit Final Health and Safety Plan	12 Nov 90
Submit Revised Background Study Report	21 Dec 90
Submit Final Community Relations Plan	22 Jan 91
Submit Final Quality Assurance Project Plan	01 Mar 91
Submit Final Standard Operating Procedures	01 Mar 91
Submit Draft Radionuclides Discharge Limits Plan	05 Apr 91

MAY WORK ACTIVITY STATUS:

Compilation of the Community Relations Plan Responsiveness Summary continued through May, on schedule for its IAG milestone submittal date of June 21, 1991.

Resolution of agency issues on the Plan for Prevention of Contaminant Dispersion (PPCD) continued through May.

Finalization of the Treatability Study Plan continued through May, on schedule for its June 3, 1991, IAG milestone submittal date. The plan identifies technologies potentially available for use in corrective/remedial actions for each type of waste/waste matrix in sites at the RFP and selects candidate technologies for evaluation in a sitewide treatability studies program. Information is included on performance, applicability, removal efficiencies, operation and maintenance requirements, and implementability for the candidate technologies. The plan proposes a statement of work for a treatability study for each candidate technology which has not been adequately evaluated on the basis of existing data.

Preliminary drafts of the criteria for reference areas and contaminants-of-concern selection for environmental

evaluations were discussed with EPA and CDH at a meeting of the Risk Assessment Task Group on May 21, 1991. The reference area criteria will require little modification. The contaminants-of-concern criteria will be modified to reflect the discussion from the meeting and additional concerns.

On May 17, 1991, EPA and EG&G staff met to discuss a rational approach for developing a Site-Specific Chemical Analyte Roster (S-CAR) instead of patently applying the CERCLA Contract Laboratory Program (CLP) analyte list. The S-CAR approach has the potential to net significant savings from reduced direct analytical and downstream labor costs. EPA was receptive to the concept. EG&G is refining the approach for initial application on OU1 and OU2.

EG&G personnel attended portions of the Rocky Flats Health Advisory Council (i.e., the Dose Reconstruction Project) meetings during the week ending May 24, 1991. Noted concerns included: (1) lack of an EG&G RFP human health risk assessment presence on the council, (2) lack of opportunity for EG&G RFP human health risk assessment to formally comment on significant council activities, and (3) the apparent highly conservative bias exhibited by the council in their activities.

PLANNED WORK FOR JUNE:

The Community Relations Plan Responsiveness Summary will be submitted for agency review and approval on its IAG milestone date of June 21, 1991.

The Treatability Study Plan will be submitted for agency review and approval on its IAG milestone submittal date of June 3, 1991.

PROBLEMS: None

OPEN ITEMS:

The agencies' review of the Radionuclides Discharge Limits Plan will continue into early July 1991.

4.0 ROUTINE ENVIRONMENTAL MONITORING

The following generalized sampling schedule for Routine Environmental Monitoring is provided as requested in Section 210 of the IAG. Detailed quarterly monitoring schedules are prepared in advance and are available to EPA and CDH upon request from the Environmental Monitoring and Assessment Division, Environmental Management Department, and EG&G Rocky Flats, Inc. The schedules are lengthy; therefore, they are not reproduced here. An EPA- or State-authorized representative may make arrangements to observe fieldwork and to obtain split or duplicate samples.

SURFACE WATER AND SEDIMENTS:

Each of the Surface Water Stations (approximately 120 stations) are sampled monthly.

Each of the Sediment Stations (approximately 40 stations) are sampled quarterly.

Each surface water and sediment sample is analyzed for the following parameters:

- CLP TCL VOAs
- CLP TAL Metals
- plus Cesium
  - Lithium
  - Molybdenum
  - Strontium
  - Tin
- Major Anions
- Radionuclides
- Field Parameters
  - pH
  - Temperature
  - Specific Conductivity
  - Dissolved Oxygen (DO)
  - Turbidity

SOILS:

Each of the Soil Stations (located at 1- and 2-mile radii from the plant center) are sampled annually.

Each soil sample is analyzed for plutonium and americium.

GROUNDWATER:

Each of the Groundwater Stations (approximately 259) are sampled quarterly; this includes alluvial wells, bedrock wells, and pre-1986 wells. Approximately one third of the wells are monitored monthly for water levels.

Each groundwater sample is analyzed for CLP TCL VOAs, CLP TAL Metals, as well as the following parameters:

Radiochemical Parameters		Inorganic Parameters	Field Parameters
Gross Alpha	Tritium	Nitrate/Nitrite	Dissolved Oxygen (DO)
Gross Beta	Lithium	Total Phosphorous	Specific Conductivity
Plutonium	Uranium	Ortho-Phosphate	Temperature
Americium	Cesium	Ammonia	Turbidity
Strontium	Tin		pH
Molybdenum			

5.0 CONTRACTOR/SUBCONTRACTOR IDENTIFICATION

Contractors and subcontractors being used on the Rocky Flats Plant Environmental Restoration Program and the work they are performing are identified on the following list as required by paragraph 13 of the IAG.

• Prime Contractor: 1-EG&G Rocky Flats, Inc, 2-CN Geotech

OU	PROJECT	* CONT	SUBCONTRACTOR	SUB-SUBCONTRACTOR	WORK DESCRIPTION	START DATE
1	Assessment	1	Ebasco	Dames & Moore Stoller Corp.	OU1 RFI/RI fieldwork (drilling, well development/completion, sampling) and RI report	Apr-91
1	Remediation	2	Diamondback Const		Implement Phase I-B interim remedial action construction at the 881 Hillside site. Construct temporary decontamination pad.	TBD
1	Remediation	1	TBD		Construct/install effluent storage tanks for OU1 IRA	Jun-91
1	Remediation	1	Bruner		OU1 IRA ion exchange system	Feb-91
1	Remediation	1	E.T. LaFore		Installation of Phase II-A treatment system equipment for OU1 IRA	Jun-91
1	Remediation	1	Eng Sciences		Design Phase II-B French drain for OU1-881 Hillside IRA	Sep-90
1	Remediation	1	TBD		Construct Phase II-B French drain at OU1 IRA	Aug-91
2	Assessment	1	Woodward-Clyde		OU2 RFI/RI Work Plan (alluvial & bedrock) and RI fieldwork (drilling, well completion/ development)	Sep-90
2	Remediation	1	Riedel Env. Svcs.		Construct/install GAC/FTU system for South Walnut Creek phase of OU2 IRA.	Apr-91
2	Remediation	1	Stearns Rogers		Design chemical precipitation/membrane filtration system for South Walnut Creek phase of OU2 IRA.	Jun-91
2	Remediation	1	TBD		Mfg./install chem. precip/filtration unit for South Walnut Creek phase of OU2 IRA	Sep-91
2	Remediation	1	TBD		Analyse water samples from OU2 South Walnut Creek treatment system.	May-91
2	Remediation	1	Woodward-Clyde		Conduct bench-scale tests on surface water from Woman Creek phase of OU2 IRA.	May-91
3	Assessment	1	IT Corporation		OU3 RI Work Plan	Mar-91
3	Assessment	1	TBD		Revegetate offsite lands	TBD

OU	PROJECT	CONT	SUBCONTRACTOR	SUB-SUBCONTRACTOR	WORK DESCRIPTION	START DATE
4	Assessment	1	IT Corporation	CH2M Hill	OU4 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	TBD
5	Assessment	1	Woodward-Clyde		OU5 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Feb-90
6	Assessment	1	Woodward-Clyde		OU6 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Feb-90
7	Assessment	1	IT Corporation	Stoller Corp.	OU7 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Apr-90
9	Assessment	1	IT Corporation		OU9 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Mar-90
10	Assessment	1	Ebasco		OU10 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	TBD
11	Assessment	1	IT Corporation		OU11 RFI/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	TBD
SW	Hist. Rel. Rep.	1	IT Corporation	Doty & Assoc.	Prepare Historical Release Report	Feb-91
SW	Adm. Record	1	Tech		Maintain IAG Administrative Record	Oct-90
SW	Geolog. Char.	1	ASI		Geologic Characterization, Data Base, and graphics	Feb-90
SW	Monitoring	1	Ebasco		Analytical Services for groundwater, surface water, and sediment	Dec-90
SW	Monitoring	1	IT Corporation		Analytical Services for groundwater, surface water, and sediment	Jul-90
SW	Fld. Oversight	1	Ebasco	Stoller Corp	ER field operations oversight	Oct-90
SW	Treatability	1	Ebasco		Sitewide treatability studies	Apr-90
SW	Treatability	1	Woodward-Clyde		Technical evaluation of sitewide treatability studies	Jul-90
SW	PPCD	1	Ebasco		Plan for Prevention of Contaminant Dispersion	Jun-90
SW	QA	1	Ebasco	SAIC	Develop and implement quality assurance prog.	Dec-90
PM	Support	1	Ebasco	Stoller Corp.	Program Management Support	Feb-90